

## **REMARKS**

Claims 1-21 are presently pending in the patent application.

### **I. THE 35 U.S.C. § 112 REJECTION**

Claims 3, 4, 9, and 10 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is traversed.

Definiteness of claim language must be analyzed in light of the content of the application disclosure, the teachings of the prior art, and the claim interpretation that would be given by one of ordinary skill in the art at the time the invention was made. *See, e.g., In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971). The essential inquiry is whether the claims set out and circumscribe a particular subject matter with a *reasonable degree* of clarity. The Applicant has set forth, in detail, a detailed description of an exemplary process by which a solid lubricant may be formed using MicroBlue® (*see, e.g.,* par. [0028]-[0030]). It is respectfully submitted that one of ordinary skill in the art at the time the invention was made, in view at least of the application disclosure, would have viewed the claims as having set out and circumscribed the claimed subject matter with a *reasonable degree* of clarity.

Moreover, Applicant notes that the term “about” has been held to be definite and believe the rejection to be improper. *See Ex Parte Eastwood*, 163 U.S.P.Q. 316 (Bd. App. 1968); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983); *see also* MPEP § 2173.05(b)(A), at 2100-217 (8th ed. rev. 4 2006).

Reconsideration and withdrawal of this rejection is respectfully requested.

### **II. THE 35 U.S.C. § 102 REJECTION**

Claims 1, 7, 12 and 13-16 were rejected under 35 U.S.C. § 102b as being anticipated by U.S. Patent Number 5,370,575 by Geib *et al* (hereinafter “Geib”). Reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1, 7, 13, and 16 have been amended. Claim 1 recites that the lower surface has “a durable solid lubricant disposed thereon.” Claim 7 recites that the stationary head comprises at least one surface having a durable solid lubricant disposed thereon. Claim 13 recites an act of “engaging the coins with a surface of a stationary sorting head coated with a durable solid

lubricant while imparting motion.” Claim 16 recites an act of “depositing a durable solid lubricant on the first surface of the object.”

**Geib** discloses the use of a lubricant. However, this lubricant is not a durable solid lubricant, such as is recited by claim 1 and claims depending therefrom. Instead, the lubricant disclosed by **Geib** appears to be a semi-liquid greasy or waxy material (e.g., a grease or wax may be made with varying degrees of fluidity, based on the addition of thickeners and may come in the form of a stick or “solid” grease), rather than a durable solid material. As noted by **Geib**, “[t]he lubricant *should also be soft enough* that it can be removed from the dimples by passing coins” (col. 7, lines 48-50)(emphasis added).

**Geib** states that “[t]he dimples 100 may be filled with the lubricant by rubbing a solid stick of the lubricant back and forth across the dimpled surfaces so as to fill with dimples 100 with lubricant and, at the same time, coat the surfaces surrounding the dimples 100” (col. 7, lines 15-21). **Geib** further teaches that “[a]s coins slide over the dimpled surfaces of the sorting head, minute mounts of the lubricant are dragged from the dimples onto the passing coins” and that “[a] portion of this lubricant is then transferred from the coins to the solid surfaces of the sorting head that engage the coins.” (col. 7, lines 32-36). **Geib** further teaches that “[t]he lubricant is replenished from time to time, preferably at intervals measured by the number of coins processed by the sorter” and that “[o]ne way to replenish the lubricant is to simply rub a solid stick of the lubricant back and forth across the dimpled surfaces.” (col. 7, lines 40-44).

The claimed durable solid lubricant (see, e.g., par. [0028]-[0030]) is characterized by a resistance to degradation. In contrast, the lubricant of **Geib** is characterized by flow of the waxy or greasy lubricant to the conveyed coins.

In view of the above, it is respectfully submitted that **Geib** fails to disclose (or suggest) the above-noted elements of claims 7, 12, and 13-16 and fails to anticipate these claims under 35 U.S.C. § 102. Reconsideration and withdrawal of this rejection is requested.

### **III. The 35 U.S.C. § 103 Rejection of Claims 2, 3, 8, 9, 19 and 20**

Claims 2, 3, 8, 9, 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Geib** in view of the OEM Off-Highway publication titled “Friction Reduction, Friction

Reducing Coating Creates Slippery Surface Without Harm” (hereinafter “**OEM Off-Highway**”) dated July 2002.

As an initial matter, Applicant respectfully traverses the Examiner’s apparent use of official notice in his assertion regarding claims 2, 8, and 19 that the use of tungsten disulphide ( $WS_2$ ) is “well known in the art” (see page 5 of Office Action). Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970)(the notice of facts beyond the record which may be taken by the examiner must be “capable of such instant and unquestionable demonstration as to defy dispute.”). The **OEM Off-Highway** reference states that  $WS_2$  “found its way into industrial applications, primarily in aerospace and defense applications,” but that “the technology didn’t go very far.” (see page 57, col. 1). Reference was also made to “auto racing” and “off-highway” engineering (see, e.g., pages 57-58). However, the limited usage of  $WS_2$  in such applications does not establish that the use of  $WS_2$  was, in fact, of notoriously and unquestionably well-known in Applicant’s field of endeavor relating to coin processing devices. If the Examiner maintains the rejection, Applicant respectfully requests identification of the reference(s) relied upon to support the Examiner’s contention that the use of  $WS_2$  was *well-known* in the art of coin processing devices (see, e.g., MPEP § 2144.03; 37 C.F.R. § 1.104(c)(2); *In re Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697). Applicant respectfully traverses this contention regarding claims 2, 8, and 19.

Further, if a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the reference are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810 (CCPA 1959). In this case, **Geib** discloses a semi-fluid lubricant that is “dragged from the dimples onto the passing coins” and that “[a] portion of this lubricant is then transferred from the coins to the solid surfaces of the sorting head that engage the coins.” (col. 7, lines 32-36). Thus, the principle of operation of **Geib** is to use a semi-liquid lubricant that is transferred not only to the conveyed coins, but also to surfaces contacted by the coins. Thus, **Geib** discloses, in essence, a fluid transfer of the lubricant from one location to another location. The **OEM Off-Highway** reference, in contrast, discloses a different principle of operation (e.g., forming a

“molecular/mechanical interlock” (page 58, col. 3). Thus, the proposed combination of **Geib** with the **OEM Off-Highway** reference would change the principle of operation of **Geib**. Accordingly, the teachings of the **OEM Off-Highway** reference are not sufficient to render claims 2, 3, 8, 9, 19 and 20 *prima facie* obvious under 35 U.S.C. § 103. Reconsideration and withdrawal of this rejection is requested for at least this reason.

It is further noted that the question of whether a claim limitation is within the level of ordinary skill in the art, whether such assertion is explicit or implied, is not a sufficient basis for concluding that the claimed subject matter would have been obvious under 35 U.S.C. § 103. That which is within the capabilities of one skilled in the art is not synonymous with obviousness. *Ex parte Gerlach*, 212 USPQ 471 (Bd. App. 1980); *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 1092 fn.16 (Fed. Cir. 1985).

#### IV. The 35 U.S.C. § 103 Rejection of Claims 4-6, 10-12, 17-18 and 21

Claims 4-6, 10-12, 17, 18 and 21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Geib**. Reconsideration and withdrawal of this rejection is requested.

As noted above, **Geib fails to** disclose or suggest a durable solid lubricant, as recited by claims 4-6, 10-12, 17, 18 and 21. Instead, **Geib discloses** only a semi-liquid lubricant that “*should also be soft enough* that it can be removed from the dimples by passing coins” (*see* col. 7, lines 32-36 and 48-50)(emphasis added).

As also noted above, if a proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the reference are not sufficient to render the claims *prima facie* obvious. *In re Ratti, supra*. Here, changing the lubricant from the disclosed semi-liquid lubricant to the disclosed solid lubricant would change the principle of operation of **Geib**. Claims 4-6, 10-12, 17, 18 and 21 are thus submitted to be non-obvious over **Geib** for at least this reason.

The Examiner alleges that, regarding claims 4 and 10, that it “it is well known in the art to apply lubricants to substrates at various thicknesses” and that would have been obvious at the time of the invention to “incorporate the solid lubricant of **Geib** at a thickness of less than one

micron to provide an effective means of lubrication. Applicant traverses the Examiner's conclusory allegation that "it is well known in the art to apply lubricants to substrates at various thicknesses." Applicant respectfully requests that the Examiner identify reference(s) relied upon to support the Examiner's contention that "it is well known in the art to apply lubricants to substrates at various thicknesses." Moreover, the Examiner has not shown that, in this application, the particular thickness of the lubricant is recognized as a result-effective variable, i.e., a variable which achieves a recognized result, and thus susceptible to a routine determination of the optimum or workable ranges of said variable. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). Instead, **Geib** teaches that the lubricant is spread by rubbing a solid stick of the lubricant back and forth, with no indication that the coating must comprise any minimum or maximum thickness and that, from time to time, may be replenished, as needed.

Regarding claim 18, Applicant traverses the Examiner's assertions that "the subject of subjecting a machined component to a nitride and heat treatment process is well known in the art" and that "it would have been obvious to one of ordinary skill in the art at the time of the invention was made to subject the sorting head 12 of Geib to such a process to enhance the performance characteristics of the component." In this claim, the "nitride and heat treatment processing" of claim 18 is performed "after machining and before the acts of forming the plurality of dimples in the first surface of the object and depositing of the durable solid lubricant on the first surface of the object." The recited sequence of acts in claim 18 cannot be ignored. *In re Freed*, 425 F.2d 785, 165 USPQ 570 (CCPA 1970). Applicant submits it is not obvious to subjecting the claimed disc-shaped metal object to "a nitride and heat treatment process after machining and before the acts of forming the plurality of dimples in the first surface of the object and depositing of the durable solid lubricant on the first surface of the object." Should the Examiner choose to maintain this rejection, the Examiner is required to make clear and particular factual determinations to support the alleged teaching or suggestion of the recited acts or any proposed alterations of the disclosed method. *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999). Broad conclusory statements, standing alone, are not "evidence" supportive of a *prima facie* showing. *McElmurry v. Arkansas Power & Light Co.*, *supra*.

Regarding claim 21, Applicant traverses the Examiner's statements that "the act of polishing a surface which required low friction is well known in the art" and that it would have been obvious "to polish the lower surface of the sorting head 12 of Geib . . . after the lubricant were applied to enhance the lubrication of the surface." As implicitly recognized by the Examiner, **Geib** neither teaches nor suggests this claim element. For obvious reasons, **Geib** does not teach or suggest polishing of the sorting head of **Geib** after smearing the waxy or greasy lubricant thereupon. The **OEM Off-Highway** reference also does not disclose or suggest polishing of the WS<sub>2</sub> lubricant. To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art". *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970); *see also In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995)(stating "[w]hen evaluating the scope of a claim, every limitation in the claim must be considered").

Further, claim 21 recites an act of "polishing the first surface of the object *after depositing the solid lubricant*" (emphasis added). The Examiner has provided no evidence of that the act of polishing a lubricant borne by a surface is well known in the art. The Examiner's burden to set forth a *prima facie* case of obviousness of the subject matter of claim 21 has not been discharged, as broad conclusory statements, standing alone, are not "evidence" supportive of a *prima facie* showing. *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578 (Fed. Cir. 1993). If the Examiner maintains the rejection of claim 21, Applicant respectfully requests identification of the reference(s) relied upon to support the Examiner's contention.

Reconsideration and withdrawal of this rejection is requested for at least the above reasons.

## V. Conclusion

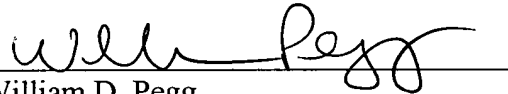
If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the number indicated.

If the Examiner maintains the rejection, Applicant respectfully requests identification of the reference(s) relied upon to support the Examiner's contentions, as noted above (*see, e.g.*, MPEP § 2144.03; 37 C.F.R. § 1.104(c)(2); *In re Zurko, supra*). Applicant respectfully traverses these contentions.

The Applicants submit that the claims are in a condition for allowance and action toward that end is earnestly solicited. Should any additional fees be required (except for payment of the issue fee), the Commissioner is authorized to deduct the fees from Jenkins & Gilchrist, P.C. Deposit Account No. 10-0447, Order No. 47171-00408USPT.

Respectfully submitted,

September 1, 2006  
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